



Spiral Growth at Threading Dislocations

A false-colored scanning tunneling microscopy image of the surface of a 4- μm -thick GaSb(001) film grown by MBE on a GaAs(001) substrate. The $0.5 \times 0.5 \mu\text{m}$ image was acquired in situ following growth of the film. Spiral-like structures, such as the one seen here, grow around threading dislocations in the film caused by the 7% lattice mismatch with the substrate. Note the pair of dislocations emerging from the surface at the top of the spiral, along with a third emerging halfway down the side; each one creates a 0.3-nm-height “step.”